AASHTO T27-99
SIEVE ANALYSIS OF FINE & COARSE AGGREGATE

APPARATUS		
	Test 1	**Test 2**
1. Sieves - See General Apparatus sieve page.		
2. Balance: AASHTO: Readable to 0.1% of sample mass?		
3. Mechanical sieve shakers (Optional), meet adequacy of sieving requirements?		
4. Oven, maintains 110 ± 5° C (230 ± 9° F)?		

PROCEDURE		
Student does not have to demonstrate shaker time efficiency check. Student will describe the procedure to proctor. It is suggested that student run base mix sample.	**Test 1**	**Test 2**
Mixtures of Fine and Coarse Aggregate Sample size the same as sample for coarse aggregates?		
Fine Aggregate — Initial mass: — Final mass:		
1. Sample obtained by T248?		
2. Minimum sample mass 300 g?		
3. (Optional) If T11 is used, does the dry nest include a 75-µm (No. 200) sieve?		
4. Sample dried to constant mass at 110 ± 5° C (230 ± 9° F)?		
5. AASHTO: Mass determined to nearest 0.1 percent of original dry mass? **Note**: If specimen consists of material leftover after T11 then Step 5 does not apply because it is assumed that total specimen mass was determined as part of that test.		
6. AASHTO: Sieving continued until not more than 0.5% by mass of the total specimen passes a given sieve during one minute of continuous hand sieving?*****		
Sieve size: — **Mass retained on sieve:** — **Mass passing sieve:**		
7. Residue on each sieve weighed to 0.1% of original dry mass?		
8. Sieves not overloaded - mass of residue on each sieve [finer than 4.75-mm (No. 4) sieves] less than 7 kg/m^2 of sieving surface (**200** g for 8" diameter sieve, 511 g for 12" diameter sieve)		
9. Total mass of material after sieving agrees with mass before sieving to within 0.3% (If not, do not use for acceptance testing)?		
10. Percentages calculated to the nearest 0.1% and reported to the nearest whole number (except 75-µm - if less than 10%, percentages reported to nearest 0.1%)?		
11. Percentage calculations based on original dry sample mass, including the passing 75-µm fraction (if T11 was used)?		

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PROCEDURE				
			Test 1	**Test 2**
Coarse Aggregate	Initial mass:	Final mass:		
1. If whole field sample is not used, is test sample obtained by T248?				
2. Sample dried to constant mass at 110 ± 5° C (230 ± 9° F)?				
3. AASHTO: Mass determined to nearest 0.1 percent of original dry mass? **Note**: If specimen consists of material leftover after T11 then Step 3 does not apply because it is assumed that total specimen mass was determined as part of that test.				
4. Minimum sample mass: 3/8 in. - 1 kg; 2 in. - 2 kg; 3/4 in. - 5 kg; 1 in. - 10 kg; 1 ½ in. - 15 kg; 2 in. - 20 kg; 2 ½ in. - 35 kg; 3 in. - 60 kg; 3 ½ in. - 100 kg?				
5. If hand sieving, particles not forced to pass through openings?				
6. AASHTO: Sieving continued until not more than 0.5% by mass of the total specimen passes a given sieve during one minute of continuous hand sieving?*****				
Sieve size:	**Mass retained on sieve:**	**Mass passing sieve:**		
7. Residue on each sieve weighed to 0.1 percent of original dry mass?				
8. Sieves not overloaded: (a) Mass of residue on each sieve [finer than 4.75-mm (No. 4) sieves] does not exceed 7 kg/m^2 of sieving surface (**200** g for 8" diameter sieve 511 g for 12" diameter sieve) (b) Mass of residue on each sieve [for 4.75-mm (No. 4) sieves and larger] does not exceed 2.5 X (sieve opening, mm) X (effective sieving area, m²)?				
9. Total mass of material after sieving agrees with mass before sieving to within 0.3% (If not, do not use for acceptance testing)?				
10. Percentages calculated to nearest 0.1% and reported to nearest whole number?				
11. Percentage calculations based on <u>original</u> dry sample mass, <u>including</u> the passing 75-µm fraction (if T11was used)?				
***** Check by hand with 8-in. diameter sieve.				

Date Tested:_____ **Person Assessed:**_____ **Assessor:**_____

Retest Date:_____ **Assessor:**_____